



**Notes:**

1. To be used for all abutments, regardless of the approach roadway grades.
2. Minimum slope of Pipe Underdrain Outlets is  $\frac{1}{4}$ " / ft.
3. For Section A-A see Sheet No. 2, 3 or 4
4. The drainage system behind each wing wall can be connected to the drainage system behind the abutment using 2 - 90° bends and a short length of pipe. This will necessitate the drainage system behind the wing wall be slightly higher.
5. For wing walls over 15 ft. long, the drainage system behind them may be independent of the drainage system behind the abutment. They can be outletted directly through the wing wall.

6. The cost of the PVC underdrain complete in place will be incidental to the substructure concrete item.

APPROVAL	
<i>[Signature]</i>	DIRECTOR
OFFICE OF BRIDGE DEVELOPMENT	
DATE: 3/4/80	
REVISIONS	
SHA	FHWA
6-24-87	6-8-90
2-19-92	.
2-9-96	.
9-14-98	.

FHWA APPROVAL  
DATE: 6-20-80

STATE OF MARYLAND  
DEPARTMENT OF TRANSPORTATION  
STATE HIGHWAY ADMINISTRATION  
OFFICE OF BRIDGE DEVELOPMENT

DRAINAGE SYSTEM AND  
BACKFILL FOR ABUTMENTS

STANDARD NO. BR-SB(0.01)-80-101

SHEET 1 OF 5

SUBSTRUCTURE ABUT